California Aqueduct Deliveries

California Aqueduct Deliveries

Program Capabilities*
Year 2005
(acre-feet per year)

Programs	Multiple Dry Years (1990-92)	Single Dry Year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
Current Programs				
SWP Deliveries (Historical)	794,700	418,000	1,549,100	1,741,000
San Luis Reservoir Carryover	-	50,000	128,600	-
Advance Delivery with Coachella Valley WD and Desert WA	24,600	12,300	46,100	61,200
Semitropic Program	45,000	35,000	-	-
Arvin Edison Program	42,000	40,000	-	-
San Bernardino Valley MWD Program	54,000	70,000	57,000	80,000
Spot Market Transfers	**	**		
Subtotal of Current Programs	**960,300**	**625,300**	**1,780,800**	**1,882,200**
Programs Under Development				
Delta Improvements	-	-	-	-
Kern Delta WD Program	30,000	30,000	-	-
Additional Transfers/Storage • San Bernardino Valley MWD Conjunctive-use Program • Westside Valley Transfers • Eastside Valley Transfers	20,000	20,000	20,000	20,000
Subtotal of Proposed Programs	**50,000**	**50,000**	**20,000**	**20,000**
Maximum Supply Capability	**1,010,300**	**675,300**	**1,800,800**	**1,902,200**

* -- Represents expected supply capability for resource programs.
** -- Purchase on as-needed basis.

California Aqueduct Deliveries

Program Capabilities*
Year 2010
(acre-feet per year)

Programs	Multiple Dry Years (1990-92)	Single Dry Year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
Current Programs				
SWP Deliveries (Historical)	794,700	418,000	1,549,100	1,741,000
San Luis Reservoir Carryover	55,800	50,000	131,000	-
Advance Delivery with Coachella Valley WD and Desert WA	24,600	12,300	46,100	61,200
Semitropic Program	45,000	35,000	-	-
Arvin Edison Program	42,000	40,000	-	-
San Bernardino Valley MWD Program	54,000	70,000	57,000	80,000
Spot Market Transfers	**	**		
Subtotal of Current Programs	**1,016,100**	**625,300**	**1,783,200**	**1,882,200**
Programs Under Development				
Delta Improvements	45,000	45,000	45,000	45,000
Kern Delta WD Program	50,000	50,000	-	-
Additional Transfers/Storage • San Bernardino Valley MWD Conjunctive-use Program • Westside Valley Transfers • Eastside Valley Transfers	150,000	150,000	20,000	20,000
Subtotal of Proposed Programs	**245,000**	**245,000**	**65,000**	**65,000**
Maximum Supply Capability	**1,261,100**	**870,300**	**1,848,200**	**1,947,200**

* -- Represents expected supply capability for resource programs.
** -- Purchased on an as-needed basis.

California Aqueduct Deliveries

Program Capabilities*
Year 2015
(acre-feet per year)

Programs	Multiple Dry Years (1990-92)	Single Dry Year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
Current Programs				
SWP Deliveries (Historical)	794,700	418,000	1,538,100	1,741,000
San Luis Reservoir Carryover	25,800	75,000	82,700	-
Advance Delivery with Coachella Valley WD and Desert WA	24,600	12,300	46,100	61,200
Semitropic Program	45,000	35,000	-	-
Arvin Edison Program	42,000	40,000	-	-
San Bernardino Valley MWD Program	54,000	70,000	57,000	80,000
Spot Market Transfers	**	**		
Subtotal of Current Programs	**986,100**	**650,300**	**1,723,900**	**1,882,200**
Programs Under Development				
Delta Improvements	200,000	200,000	200,000	200,000
Kern Delta WD Program	50,000	50,000	-	-
Additional Transfers/Storage • San Bernardino Valley MWD Conjunctive-use Program • Westside Valley Transfers • Eastside Valley Transfers	190,000	190,000	20,000	20,000
Subtotal of Proposed Programs	**440,000**	**440,000**	**220,000**	**220,000**
Maximum Supply Capability	**1,426,100**	**1,090,300**	**1,943,900**	**2,102,200**

* -- Represents expected supply capability for resource programs.
** -- Purchased on an as-needed basis.

California Aqueduct Deliveries

Program Capabilities*
Year 2020
(acre-feet per year)

Programs	Multiple Dry Years (1990-92)	Single Dry Year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
Current Programs				
SWP Deliveries (Historical)	794,700	418,000	1,530,700	1,741,000
San Luis Reservoir Carryover	-	75,000	81,100	-
Advance Delivery with Coachella Valley WD and Desert WA	24,600	12,300	46,100	61,200
Semitropic Program	45,000	35,000	-	-
Arvin Edison Program	42,000	40,000	-	-
San Bernardino Valley MWD Program	54,000	70,000	57,000	80,000
Spot Market Transfers	**	**		
Subtotal of Current Programs	**960,300**	**650,300**	**1,714,900**	**1,882,200**
Programs Under Development				
Delta Improvements	200,000	200,000	200,000	200,000
Kern Delta WD Program	50,000	50,000	-	-
Additional Transfers/Storage • San Bernardino Valley MWD Conjunctive-use Program • Westside Valley Transfers • Eastside Valley Transfers	190,000	190,000	20,000	20,000
Subtotal of Proposed Programs	**440,000**	**440,000**	**220,000**	**220,000**
Maximum Supply Capability	**1,400,300**	**1,090,300**	**1,934,900**	**2,102,200**

* -- Represents expected supply capability for resource programs.
** -- Purchased on an as-needed basis.

CALIFORNIA AQUEDUCT DELIVERIES
STATE WATER PROJECT DELIVERIES

SOURCE OF SUPPLY

The State Water Project provides imported water to the Metropolitan service area and has historically provided from 25 to 50 percent of Metropolitan's supplies. In accordance with its contract with the Department of Water Resources (DWR), Metropolitan is entitled to 2,011,500 acre-feet per year from the State Water Project. Actual deliveries have never reached this amount and depend on availability of supplies as determined by DWR. Metropolitan pays both fixed costs of financing SWP facilities construction and variable costs of operations, maintenance, power and replacement costs for water delivered each year. SWP water is delivered to Metropolitan through the East Branch at Devils Canyon Power Plant afterbay, along the Santa Ana Valley Pipeline and at Lake Perris. Metropolitan takes delivery from the West Branch at Castaic Lake.

EXPECTED SUPPLY CAPABILITY

The Edmund G. Brown California Aqueduct is capable of transporting Metropolitan's full 2,011,500 acre-feet of SWP entitlement. The quantity of water available for export through the California Aqueduct, however, can vary significantly year to year. The amount of precipitation and runoff in the Sacramento and San Joaquin watersheds, system reservoir storage, regulatory requirements and contractor demands for SWP supplies impact the quantity of water available to Metropolitan.

Prior to the execution of the Bay-Delta Accord in 1995, significant uncertainties existed regarding how much of the water in the Sacramento San Joaquin Bay-Delta would be available for export and how much would be required to meet regulatory requirements for meeting water quality standards and sustaining endangered spices. The Bay-Delta Accord and the subsequent CALFED process removed significant uncertainties associated with regulatory requirement thus providing a base for the DWR and the SWP contractors to estimate available water supplies. As discussed in a subsequent section, actions being undertaken by the CALFED process and the Phase 8 water rights process should enhance the reliability of supplies in the future.

Utilizing the regulatory standards in the Bay-Delta Accord, and historic precipitation and runoff data and reservoir levels, DWR estimates the water supply available for export to Metropolitan and the SWP contractors. These estimated base supplies are shown on the table below.

RATIONALE FOR EXPECTED SUPPLY

Metropolitan and 28 other public entities have contracts with the State of California, for a State Water Project water supply. These contracts require the state through its DWR, utilize reasonable efforts to develop and maintain a SWP water supply. The state has made significant investment in infrastructure. It has constructed 28 dams and reservoirs, 26

Estimated Water Supplies Available for Metropolitan's Use
Based on Historical State Water Project Deliveries
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	794,700	418,000	1,549,100	1,741,000
2010	794,700	418,000	1,549,100	1,741,000
2015	794,700	418,000	1,538,100	1,741,000
2020	794,700	418,000	1,530,700	1,741,000

* --Represents expected supply capability for the resource program.

pumping and generation plants and about 660 miles of aqueducts. Over 19 million of residents benefit from water from the SWP. To date the project has delivered in excess of 56 million acre-feet with the single year deliveries exceeding 3.5 million acre-feet in 2000. DWR estimates that with current facilities and regulatory environment the project will on average deliver 3 million acre-feet per year. Under its contract Metropolitan may utilize 48% of this quantity.

Further, under the water supply contract DWR is required to utilize reasonable efforts to maintain and increase the reliability of service to Metropolitan. As discussed in a subsequent section DWR is participating in the CALFED process to achieve these requirements.

Historical Record: The historic record shows significant accomplishments by DWR in providing its contractors with SWP water supplies. To date the project has delivered in excess of 56 million acre-feet. Deliveries exceeded 3.5 million acre-feet in 2000. DWR has continued to invest in SWP facilities to deliver water to its contractors. Some of the significant projects are listed below:

Written Contracts or Other Proof:

- 1960 Contract between the State of California and the Metropolitan Water District of Southern California for a Water Supply. This Contract, initially executed in 1960 and amended numerous times since, is the basis for Metropolitan's entitlement to the SWP. It requires the States DWR to make reasonable efforts to secure water supplies for Metropolitan and its other contractor. The contract expires in 2035, however, Metropolitan has the option to renew the contract under the same basic conditions.

Financing: Metropolitan's payments for its State Water contract obligation are approved each year by Metropolitan's Board of Directors and currently constitute approximately 35% of Metropolitan's annual budget.

Federal, State and Local Permits: The DWR is responsible for acquiring, maintaining and complying with numerous Federal and State permits for operation of the SWP. In

2000, the DWR has taken a leading role in acquiring and delivering power in California. Metropolitan has be active in monitoring the issues affecting its contract with DWR.

- Environmental Impact Report for the Eastbranch Enlargement. In April 1984 DWR prepared and finalized an Environmental Impact Report for the Enlargement of the East Branch of the Governor Edmund G. Brown California Aqueduct.
- Environmental Impact Report for the Harvey O. Banks Pumping Plant. In January 1986 DWR prepared and finalized an Environmental Impact Report for the Additional Pumping Units at Harvey O. Banks Delta Pumping Plant.
- Environmental Impact Report for the Mission Hills Extension. In 1990 DWR prepared and finalized an Environmental Impact Report for the State Water Project Coastal Branch, Phase II and Mission Hills Extension.
- East Branch Extension Project Phase 1. In 1998 DWR completed an EIR to extend the East Branch of the California Aqueduct to provide service to San Gorgonio Pass Water Agency. Construction of phase 1 will be completed in 2002.

CALIFORNIA AQUEDUCT DELIVERIES
DESERT WATER AGENCY/COACHELLA VALLEY WATER DISTRICT/METROPOLITAN WATER EXCHANGE PROGRAM

SOURCE OF SUPPLY

The Desert Water Agency (DWA) and Coachella Valley Water District (CVWD), both in Riverside County, have entitlements to State Water Project (SWP) water, but do not have any physical connections to the SWP facilities. Both Agencies are adjacent to the Colorado River Aqueduct. In order for DWA and CVWD to obtain water equal to their SWP entitlement allocations, Metropolitan has agreed to exchange an equal quantity of its Colorado River water for DWA and CVWD's SWP water. DWA has a SWP entitlement of 38,100 acre-feet per year and CVWD has a SWP entitlement of 23,100 acre-feet per year, for a total of 61,200 acre-feet per year.

EXPECTED SUPPLY CAPABILITY

Under the existing agreements, Metropolitan provides water from its Colorado River Aqueduct to DWA and CVWD in exchange for SWP entitlement supplies of those agencies. Metropolitan can deliver additional water to its DWA/CVWD service connections permitting these agencies to store water. When supplies are needed, Metropolitan can then receive its full Colorado River supply as well as the State Water Project entitlement allocation from the two agencies, while the two agencies can rely on the stored water for meeting their water supply needs. As of the end of September 2001, there was 238,795 acre-feet in the Advance Delivery account. The combined SWP entitlement of DWA and CVWD is 61,200 acre-feet. The water supply available to Metropolitan is presented below:

Estimated Water Supplies Available for Metropolitan's Use
Under the Desert Water Agency & Coachella Valley Water District
Water Exchange Program
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	24,600	12,300	46,100	61,200
2010	24,600	12,300	46,100	61,200
2015	24,600	12,300	46,100	61,200
2020	24,600	12,300	46,100	61,200

* --Represents expected supply capability for the resource program.

RATIONALE FOR EXPECTED SUPPLY

The DWR estimates the amount of supplies that are available each year. Metropolitan uses a forecasting method for SWP deliveries based on historical patterns of precipitation, runoff and actual deliveries of water.

Historical Record: The DWA and CVWD Exchange Program is currently in operation. The Advance Delivery Agreement has been in place since 1967 and modified in 1984.

Written Contracts or Other Proof:

- 1967 and 1983 Water Exchange Contract and Agreements. The DWA and CVWD Program is currently in operation. The DWA and CVWD water exchange contracts have been in place since 1967, amended in 1972 and were modified with execution of additional agreements in 1983.
- 1984 Advance Delivery Agreement. DWA, CVWD and Metropolitan executed an Advance Delivery Agreement. This Advance Delivery Agreement allows Metropolitan to supply DWA and CVWD with Colorado River water in advance of the time these agencies are entitled to receive water under the Exchange Agreement. In future years, Metropolitan can recover this water by reducing its deliveries under the exchange agreement.

Financing: The funds for deliveries under this Program are included in Metropolitan's O&M budget and Long-range Financial Plan.

Federal, State, and Local Permits for Construction: The DWR is responsible for acquiring, maintaining and complying with numerous Federal and State permits for operation of the SWP.

- July 26, 1983 CVWD Negative Declaration, Whitewater River Spreading Area expansion Phase 1.

- February 1983, DWA Final EIR for the proposed extension of time for utilizing Colorado River water to recharge the upper Coachella Valley groundwater basins to the year 2035, Volume I and II, April 1983 Volume III

CALIFORNIA AQUEDUCT DELIVERIES
SEMITROPIC WATER BANKING AND EXCHANGE PROGRAM

SOURCE OF SUPPLY

The agreement between Semitropic Water Storage District (Semitropic) and Metropolitan was implemented in February 1994. Semitropic obtains water from the SWP through its contracts with the Kern County Water Agency. SWP supplies irrigate an area of 161,200 acres within Semitropic's service area. When this surface water is not available, these growers withdraw water from the underlying aquifer. The contract between Semitropic and Metropolitan to allow Metropolitan to make use of 35% of the additional storage in Semitropic's groundwater basin. In years of plentiful supply, Metropolitan could deliver available SWP supplies to Semitropic through the California Aqueduct. During dry years, Metropolitan could withdraw this stored water. Four other banking partners participate in this Program and utilize the remaining 65% of the additional storage in Semitropic's groundwater basin.

EXPECTED SUPPLY CAPABILITY

The Semitropic-Metropolitan Program provides Metropolitan with the capacity to store up to 350,000 acre-feet of water under the current agreement. During dry years, Metropolitan can recover its stored water through a combination of direct pumping of the groundwater and the release of Semitropic's SWP entitlement. The return of water to Metropolitan ranges from 31,000 to 170,000 acre-feet per year depending on groundwater conditions and water supply hydrology and banking partners usage.

Estimated Water Supplies Available for Metropolitan's Use
Under the Semitropic Water Banking and Exchange Program
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	45,000	35,000	-	-
2010	45,000	35,000	-	-
2015	45,000	35,000	-	-
2020	45,000	35,000	-	-

* --Represents expected supply capability for the resource program.

RATIONALE FOR EXPECTED SUPPLY

Implementation Status: The Semitropic-Metropolitan Water Banking & Exchange Program has been operational since 1994 and with existing agreements will continue to operate over the term of 41 years (1994-2035). Metropolitan has about 360,700 acre-feet in its storage account and withdrew 31,500 acre-feet in 2001.

Written Contracts or Other Proof:

- 1992 Turn-in/out Construction, Operation and Maintenance Agreement. This Agreement was executed in 1992 by the Department of Water Resources and Semitropic to allow construction, operation and maintenance of the Semitropic California Aqueduct Turn in/out.
- 1993 Temporary Semitropic-Metropolitan Water Banking Agreement. This Agreement was executed in February 1993 by Semitropic and Metropolitan to allow the storage of available Metropolitan Supplies in advance of execution of the long-term agreement.
- 1994 Semitropic/Metropolitan Water Banking and Exchange Agreement. This Agreement was executed in December 1994 by Semitropic and Metropolitan to implement the program for a 41 year term (1994-2035).
- 1995 Point of Delivery Agreement. This agreement, with The Department of Water Resources, Kern County Water Agency and Metropolitan, allows Metropolitan to divert water from the California Aqueduct into Semitropic's service area.
- 1995 Introduction of Local water into the California Aqueduct. This agreement, with The Department of Water Resources, Kern County Water Agency and Semitropic, allows Metropolitan to receive water from the program into the California Aqueduct.

Financing: Metropolitan's payments for the Semitropic Program are included in the O&M budget and paid out of the Water Transfer Fund.

Federal, State and Local Permits for Construction:

- Final EIR. Semitropic acting as the Lead agency under CEQA and Metropolitan acting as a responsible agency jointly completed the Environmental Impact Report for the Program. The EIR was certified by Semitropic In July 1994 and adopted by Metropolitan in August 1994
- Regulatory Approvals. All regulatory approvals are in place and program is operational.

CALIFORNIA AQUEDUCT DELIVERIES
ARVIN-EDISON WATER MANAGEMENT PROGRAM

SOURCE OF SUPPLY

The Arvin-Edison Water Storage District (Arvin-Edison) manages the delivery of local groundwater and water imported into its service area from the Central Valley Project's (CVP) Millerton Reservoir via the Friant-Kern Canal. The surface water service area consists of 132,000 acres of predominantly agricultural land, and to a minor degree, municipal and industrial uses. It is situated in Kern County. Arvin-Edison operates its supplies conjunctively, storing water in the underlying aquifer when imported supplies are available and withdrawing that water when the availability of imported supplies are reduced. In 1997, Metropolitan entered into an agreement with the Arvin-Edison Water Storage District. The agreement allows Metropolitan to store available water in Arvin-Edison's groundwater basin, either through direct spreading operations, or through deliveries to growers in Arvin-Edison's service area. Similar to Arvin-Edison's own usage, this previously stored water could be withdrawn when the availability of imported supplies to Metropolitan is reduced.

EXPECTED SUPPLY CAPABILITY

The Arvin-Edison/Metropolitan Program provides Metropolitan with the capacity to store up to 250,000 acre-feet of water under the current agreement, and the option to increase the storage capacity to 350,000 acre-feet. During dry years, Metropolitan can recover its stored water either through direct pumping of the groundwater or through exchange. The return of water to Metropolitan ranges from 40,000 to 75,000 acre-feet per year depending on groundwater conditions and water supply hydrology.

Estimated Water Supplies Available for Metropolitan's Use
Under the Arvin-Edison Water Banking Program
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	42,000	40,000	-	-
2010	42,000	40,000	-	-
2015	42,000	40,000	-	-
2020	42,000	40,000	-	-

* --Represents expected supply capability for the resource program.

RATIONALE FOR EXPECTED SUPPLY

Implementation Status: The Arvin-Edison/Metropolitan Water Management Program has been operational since 1997 and by existing agreements will continue to operate over the term of 30 years (1997-2027) with a possible extension to 2035. Metropolitan has about 210,000 acre-feet in its storage account and withdrew 20,000 acre-feet in 2001.

Written Contracts or Other Proof:

- 1997 Arvin-Edison/Metropolitan Water Management Agreement. This Agreement was executed in December 1997 by Arvin-Edison and Metropolitan to implement the program for a 30 year term (1997-2027).
- 1998 Turn-in/out Construction and Maintenance Agreement. This Agreement was executed in 1998 by the Department of Water Resources, Kern County Water Agency, Arvin-Edison and Metropolitan to allow construction, operation and maintenance of the Arvin-Edison California Aqueduct Turn in/out.
- 1998-2002 Water Delivery and Return Agreements. These agreements, with the Department of Water Resources, Kern County Water Agency, Arvin-Edison and Metropolitan, allow Metropolitan to divert water from, and introduce water to, the California Aqueduct.

Financing: Metropolitan's payments for the Arvin-Edison Program are included in the O&M budget and paid out of the Water Transfer Fund.

Federal, State and Local Permits for Construction:

- Regulatory Approvals. All regulatory approvals are in place
- Environmental Status. The Negative Declaration was completed in 1996.

CALIFORNIA AQUEDUCT DELIVERIES
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT PROGRAM

SOURCE OF SUPPLY

The San Bernardino Valley Municipal Water District Program allows Metropolitan to purchase a dependable annual supply, as well as, an additional supply for dry year needs. Under this program, Metropolitan purchases water provided to San Bernardino Valley Municipal Water District (Valley District) from its annual State Water Project (SWP) water allocation. Valley District delivers the purchased supplies to Metropolitan's service area through the coordinated use of facilities and interconnections within the water conveyance system of the two districts.

The purchased SWP supply is provided to Metropolitan as direct deliveries of annual SWP water through the California Aqueduct to Metropolitan's service area and as deliveries of recaptured SWP water previously stored in the San Bernardino groundwater basin to Metropolitan's service area. Under this Program, Metropolitan purchases a minimum of 20,000 acre-feet per year of SWP allocation every year. In addition, Metropolitan has the option to purchase Valley District's additional SWP allocation, if available, and the first-right-of-refusal to purchase additional SWP supplies available beyond the minimum and option amounts. In the event that Metropolitan's operational needs do not require all, or a portion of the minimum purchased water, that unused amount may be carried forward up to a total of 50,000 acre-feet for later delivery. Finally, the program establishes a critical dry year supply account for Metropolitan, which could provide additional amounts of dry year supplies. During any year designated by DWR as a critically dry year, Valley District could deliver from this account up to 50,000 acre-feet of recaptured SWP water previously stored in the San Bernardino groundwater basin. In order to facilitate the transfer, the program also provides the coordinated use of existing facilities, including the Foothill Pipeline and Inland Feeder, to improve the conveyance capabilities of the delivery of SWP water to the service areas of both districts.

EXPECTED SUPPLY CAPABILITY

Based on contract provisions for the minimum, option, first-right-of-refusal, and critical dry year supply account purchases of available SWP water from Valley District, the water supply available to Metropolitan are as follows:

RATIONALE OF EXPECTED SUPPLY

Implementation Status: The San Bernardino Valley Municipal Water District Program began operations in 2001 and is expected to remain in effect on an evergreen term basis.

Historical Record: Metropolitan has purchased 20,000 acre-feet of water under this Program in July 2001 and is scheduled to purchase at least 20,000 acre-feet of water in 2002.

Estimated Water Supplies Available for Metropolitan's Use
Under the San Bernardino Valley Municipal Water District Program
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	54,000	70,000	57,000	80,000
2010	54,000	70,000	57,000	80,000
2015	54,000	70,000	57,000	80,000
2020	54,000	70,000	57,000	80,000

* --Represents expected supply capability for the resource program.

Written Contracts or Other Proof: Metropolitan's dependable annual and dry-year supplies from the San Bernardino Valley Municipal Water District Program are based on Metropolitan Board actions and agreements.

- 2000 Board Approval of Coordinated Operating Agreement. In June 2000, Metropolitan's Board authorized entering into a Coordinated Operating Agreement between Metropolitan and Valley District to develop projects that could provide benefits to both districts through the coordinated use of facilities and SWP supplies.
- 2000 Coordinated Operating Agreement. The Coordinate Operating Agreement between Metropolitan and Valley District was executed in July 2000.
- 2001 Board Approval of the Coordinated Use Agreement. In April 2001, Metropolitan's Board authorized entering into the Coordinated Use Agreement for Conveyance Facilities and SWP Water Supplies between Metropolitan and Valley District for the purchase of dependable annual and dry year supplies by Metropolitan.
- 2001 Coordinated Use Agreement. The Coordinated Use Agreement for Conveyance Facilities and SWP Water Supplies between Metropolitan and Valley District for the purchase of dependable annual and dry year supplies by Metropolitan was executed May 2001. The Agreement is effective as of July 1, 2001 for an "evergreen" term (10-year term with automatic annual extensions unless otherwise notified).

Financing: The funds to purchase Program water are included in Metropolitan's Water Transfer Fund and O&M budget.

Federal, State, and Local Permits/Approvals: The Program is effective as of July 1, 2001. An environmental review process and regulatory approval supported implementation.

- Final EIR. Final Regional Water Facilities Master Plan Environmental Impact Report dated February 1, 2001 was certified by Valley District, as lead agency, and by Metropolitan, as responsible agency. Notices of determinations were filed by Valley District and Metropolitan on May 29, 2001 and April 18, 2001, respectively.

- State Water Contractors' Review. In May 2001 the State Water Contractors reviewed and issued a letter supporting the program.
- DWR Review. The California Department of Water Resources agreed to the program in December 2001.

CALIFORNIA AQUEDUCT DELIVERIES
BAY-DELTA IMPROVEMENTS

SOURCE OF SUPPLY

Improving the water supply reliability of the State Water Project (SWP) is a primary focus of Metropolitan's long-term planning efforts. Restoring and stabilizing the health of the Bay-Delta through the implementation of CALFED's Bay-Delta Program and the Sacramento Valley Water Management Agreement are important steps to accomplishing this objective. These improvements could provide the regulatory certainty needed to better manage Bay-Delta supplies for the benefit of all users. These improvements are necessary for Metropolitan to attain its goal of 618,000 acre-feet of supply yield from the Bay-Delta in dry years by 2020. This supply yield is 200,000 acre-feet over existing available supplies, as described in its July 1999 policy direction regarding the Bay-Delta and CALFED. This goal means that Metropolitan could plan to use only 32.5 percent of its total SWP contract amount of 2.0 million acre-feet per year in dry years. In addition, Metropolitan policy objectives for Bay-Delta improvements include an average of 1.5 million acre-feet of supply yield to Metropolitan over all year types. Metropolitan's strategy is to reduce its dependence on SWP supplies during dry years, when risks to the Bay-Delta ecosystem are greatest, and to maximize its deliveries of available SWP water during wetter years to store in surface reservoirs and groundwater basins for later use during droughts and emergencies.

The SWP conveys water from the western slope of the Sierra Nevada Mountains to water users both north and south of the Bay-Delta. Specifically, SWP is delivered to Metropolitan's service area through a system of reservoirs, the Bay-Delta, pumping plants and the California Aqueduct. Owned and operated by the California Department of Water Resources (DWR), the SWP provides municipal and agricultural water to 29 State Water Contractors. Annual deliveries for the total SWP average about 2.5 million acre-feet. Municipal uses account for about 60 percent of annual deliveries, with the remaining 40 percent going to agriculture.

CALFED Bay-Delta Program: CALFED is a process involving numerous stakeholders (federal and state representatives, water users, environmental entities, and other interests) to develop solutions for Bay-Delta problems. On August 28, 2000, CALFED's Bay-Delta Program was approved and laid out final implementation plans for the first phase – the first seven years – of what is conceived to be up to 30 years of improvements in the Bay–Delta. This Program would be implemented through 11 major elements.

- Storage. By pursuing more water storage capacity in both surface reservoirs and underground aquifers, the Program could help to meet the needs of California's growing population, and provide much-needed flexibility to improve water quality and restore ecosystems. This Storage Element provides for the development of up to 950,000 acre-feet of new surface storage capacity and up to 1 million acre-feet of new groundwater storage capacity in Stage 1 of CALFED.
- Conveyance. Moving water through the Bay-Delta as efficiently as possible could increase the water system's flexibility and boost ecosystem health, water quality and levee stability. The Conveyance Element commits to through-delta conveyance

improvements, such as channel enlargements, the possibility of a screened Sacramento River water diversion to the Central Delta, and South of Delta programs.

- Water Use Efficiency. The Program proposes significant investments in water-use efficiency to generate real water supply benefits in the short-term. The Water Use Efficiency Element establishes the following annual targets: urban conservation savings of 520,000 to 680,000 acre-feet; agricultural savings of 260,000 to 350,000 acre-feet; and savings from water recycling of 225,000 to 310,000 acre-feet.

- Water Transfers. Through development of an effective water transfer market, CALFED aims to stretch existing water supplies by promoting transfers from willing sellers to buyers while protecting other water users, local economies and the environment. The Water Transfer Element seeks to streamline the approval process of state and federal agencies for water transfers and to create an Internet-based Water Transfers Information Clearinghouse.

- Ecosystem Restoration. Improvements in ecosystem health could reduce the conflict between environmental water use and other beneficial uses, and could allow more flexibility in water management decisions. The Ecosystem Restoration Element could recover at-risk native species; rehabilitate natural processes related to hydrology, stream channels, sediment, floodplains, and ecosystem water quality; maintain and enhance populations of species critical to commercial fisheries; protect and restore functional habitats; reduce the negative impacts of invasive species; and improve and maintain water and sediment quality.

- Environmental Water Account. Under the Environmental Water Account, water is acquired, stored and allocated to better protect fish and habitats at critical times. Many water users, including Metropolitan have transferred water supplies to this account. In return for the environmental benefits of water under this account, there are regulatory assurances that the existing deliveries of SWP and Central Valley Project water would not be disrupted.

- Watersheds. By providing financial and technical assistance for local watershed projects, CALFED would support projects that reduce water quality problems, restore and protect habitats, and improve water supply reliability. The Watershed Element seeks to foster local leadership by encouraging landowners, community members, environmental organizations and local public agencies to come together on watershed projects.

- Drinking Water Quality. The Drinking Water Quality Element identifies four actions for implementation: implement programs to manage salt loadings in the San Joaquin Valley; implement source control programs to reduce contaminants from Delta and upstream sources; invest in water treatment technology demonstration projects for UV disinfection and desalination; and control runoff into the California Aqueduct with the construction of necessary physical improvements.

- Levee System Integrity. This Program element provides for the stabilization and improvement of Delta levees to protect in-Delta as well as export users. It seeks to improve levees to a higher standard for greater protection; improve emergency response capabilities; reduce conflicts between levee maintenance and habitat needs;

improve coordination permit processes; and develop adequate and reliable funding for levee maintenance.

- Science Methods. The Bay-Delta Program commits to a science program to guide adaptive management decisions. The program includes the appointment of an eminent lead scientist to be assisted by an Independent Science Board. The Board will issue annual reports regarding the status and effectiveness of program measures and will recommend adjustments.

- Program Tracking and Accountability. Performance measures are used to translate program goals and objectives into measurable benchmarks of program success. They present information on conditions, trends and their significance. The Program will develop a project tracking system; track each project's performance, cost and schedule; measure progress to assure balance across all elements of the Program; and provide monthly status information on each project.

Sacramento Valley Water Management Agreement: Along with other SWP contractors, Metropolitan is working to ensure that the burden of meeting flow requirements set out by the 1995 Water Quality Control Plan (WQCP) is fairly shared across all Bay-Delta water users in the Phase 8 SWRCB hearing process. This hearing process has been stayed in order to allow discussions on a settlement agreement between the parties. The settlement agreement requires the development of short-term and long-term work plans to develop and manage water resources to meet Sacramento Valley in-basin needs, environmental needs under the WQCP, and export supply needs for consumptive demands and water quality.

- Short-term Work Plan for Settlement Agreement. A short-term work plan detailing projects that could provide benefits by the 2002 and 2003 water years was developed in October 2001. This plan comprises 45 projects that have been submitted for evaluation by the Work Plan Development Team from 16 entities in the Sacramento Valley. These projects can be divided into four categories; (1) conjunctive use projects involving development of groundwater supplies to be used in conjunction with surface water to provide for additional in-basin and export needs, including the WQCP relief, (2) system improvement projects involving the lining of canals, diversion modifications and improvement in water measurement, (3) groundwater planning and monitoring projects intended to better characterize the resource and allow for expansion of conjunctive use and water transfer activities, and (4) resolution of certain regulatory or institutional issues which present impediments to resolution of in-basin needs or water transfers. About 185,000 acre-feet of water annually are expected to be produced by the conjunctive use projects in the Sacramento Valley and could be available for use under a settlement. Much of this water could produce new yield. As a result, Metropolitan could be allocated up to 45, 000 acre-feet per year.

- Long-term Work Plan for Settlement Agreement. A medium and long-term work plan is required by Aril 26, 2002, detailing projects that can be operational by December 31, 2005 and December 31, 2010, respectively. The work plans will incorporate a number of water management tools to produce multiple benefits including groundwater/surface water conjunctive use, basin-wide management, coordinated operation of storage facilities, and improved management of water diversion and

distribution facilities, transfers and exchanges, water conservation and new off-stream surface storage.

EXPECTED SUPPLY CAPABILITY

Based on the work plans for CALFED's Bay-Delta Program and the Phase 8 SWRCB Water Rights Proceedings, annual and dry-year supplies capabilities are projected as follows:

Estimated Water Supplies Available for Metropolitan's Use Under the Bay Delta Improvements
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	-	-	-	-
2010*	45,000	45,000	45,000	45,000
2015**	200,000	200,000	200,000	200,000
2020**	200,000	200,000	200,000	200,000

* Based on the short-term work plan for the Sacramento Valley Water Management Agreement.
** Based on the medium and long-term work plans for the Sacramento Valley Water Management Agreement and approved implementation plan for CALFED's Bay-Delta Program.

RATIONALE FOR EXPECTED SUPPLY

Implementation Status: Expected supplies are projected in accordance with the approved implementation plan for CALFED's Bay-Delta Program and with the work plans for the Sacramento Valley Water Management Agreement.

Written Contracts or Other Proof: Metropolitan's projected dependable annual and dry-year supplies from planned Bay-Delta improvements are based on Metropolitan Board actions and agreements.

- CALFED's Bay-Delta Program.
  - Bay-Delta Accord approved in December 1994.
  - Proposition 204 Funds approved by voter in November 1996.
  - Metropolitan policy direction regarding CALFED's Bay-Delta Program adopted in July 1999. This policy direction established water supply goals.
  - Proposition 13 funds approved by voters in March 2000.
  - CALFED Framework announced in June 2000.
  - Final implementation plans for the first phase of CALFED's Bay-Delta Program approved in August 2000, in conjunction with the approval of the Program and conclusion of the environmental review process.
- Sacramento Valley Water Management Agreement.
  - Short-term work plan detailing projects that could provide benefits by the 2002 and 2003 water years was developed in October 2001.

- Statement of settlement policy principles recommended in December 2001 by negotiators for approval.
- Statement of settlement policy principles approved by Metropolitan's Board in January 2002.
- Medium and long-term work plans required by April 2002, detailing projects that can be operational by December 31, 2005 and December 31, 2010, respectively.

Financing: Financing for Bay-Delta improvements are as follows:

- CALFED's Bay-Delta Program. Overall cost-sharing plans assume an equal distribution of the program costs among state, federal, and user/local funds. Final cost-sharing arrangements will depend on the specific projects that are implemented, and they will vary year by year. Initial years could be heavily funded by federal and state dollars. This initial funding will not include the cost of constructing the major storage or conveyance elements. Final cost shares, including reimbursement of up-front funding, are intended to be based upon a "beneficiaries pay" principle.
  - Year 1 funding arrangements were established in July 2000.

State	$528.1 million
Federal	$ 78.0 million
Other	$221.0 million
Unmet	$ 77.7 million

  - Year 2 funding arrangements were initiated in July 2001.

State	$553.1 million
Federal and Unmet Needs	$370.0 million
Other	$ 33.5 million

Federal, State, and Local Permits/Approvals:

- CALFED's Bay-Delta Program.
  - Programmatic Environmental Document finalized in July 2000.
  - Record of Decision issued in August 2000 for the final Programmatic Environmental Document regarding the CALFED Bay-Delta Program.
- Sacramento Valley Water Management Agreement.
  - Environmental review will be conducted by the applicable lead agencies on the various work plan projects to comply with the California Environmental Quality Act, and as appropriate the National Environmental Policy Act.

CALIFORNIA AQUEDUCT DELIVERIES
KERN DELTA WATER MANAGEMENT PROGRAM

SOURCE OF SUPPLY

In December 1999 Metropolitan advertised a request for proposals for participation in "The California Aqueduct Dry-year Transfer Program." As a result of this request for proposals, four programs were selected for further consideration of which Kern Delta Water District (Kern Delta) was part. In 2001, Metropolitan entered into Principles of Agreement with Kern Delta for the development of a Dry-year supply program. Kern Delta serves 125,000 acres of actively farmed highly productive farmland located in the San Joaquin Valley portion of southern Kern County. Kern Delta has under contract 180,000 acre-feet per year of good quality highly reliable pre- 1914 Kern River water and 25,500 acre-feet per year of SWP entitlement (under contract with Kern County Water Agency).

The dry-year supply program between Kern Delta and Metropolitan involves the storage of water with Kern Delta. Basically, in years of plentiful supply the agreement allows Metropolitan to store water in Kern Delta's groundwater basin, either through direct spreading operations, or through deliveries to growers in Kern Delta's service area. Metropolitan has access to the capacity to store up to 250,000 acre-feet of water at any one time and 400,000 acre-feet of water over the term of the agreement. When needed, Metropolitan can recover its stored water either through direct pumping of the groundwater or exchange at a rate of 50,000 acre-feet per year. The duration of the program will be from 2002 to 2027 with provisions allowing the water to be withdrawn until 2033.

EXPECTED SUPPLY CAPABILITY

The Kern Delta/Metropolitan Program provides Metropolitan with the capacity to store up to 250,000 acre-feet of water at any one time, and the option to store 400,000 acre-feet of water over the term of the agreement. When needed, Metropolitan can recover its stored water either through direct pumping of the groundwater or exchange at a rate of 50,000 acre-feet per year.

Estimated Water Supplies Available for Metropolitan's Use
Under the Kern Delta Water Management Program
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	30,000	30,000	-	-
2010	50,000	50,000	-	-
2015	50,000	50,000	-	-
2020	50,000	50,000	-	-

* --Represents expected supply capability for the resource program.

RATIONALE FOR EXPECTED SUPPLY

Implementation Status: Expected supplies are projected in accordance with accepted detailed groundwater modeling that has been accomplished for the program. In addition, the Kern Delta/Metropolitan Water Management Program has could be operational (with Board approval) by June 2002 and excepting water for storage by Sept 2002.

Financing: Metropolitan's payments for the Kern Delta/Metropolitan Program are included in the O&M budget and paid out of the Water Transfer Fund.

Written Contracts or Other Proof:

- 2001 Kern Delta/Metropolitan Principles of Agreement. Principles of agreement were entered into between Kern delta and Metropolitan in June 2001, covering program costs, operational aspects and risks/responsibilities.

Federal, State and Local Permits for Construction: Kern Delta, acting as lead agency under CEQA has prepared a full Environmental Impact Report. As part of this EIR, Kern Delta published a Notice of Preparation, and held meetings with the general public, interested agencies and resource agencies. The Draft EIR is expected to be released in February 2002 for Public review and certified by Kern Delta by April.

CALIFORNIA AQUEDUCT DELIVERIES
SPOT MARKET WATER PURCHASES

SOURCE OF SUPPLY

Metropolitan has acquired dry-year supplies through spot market water transfers in the past 10 years. Spot market water transfers involve water that is purchased only during the time of need (usually a drought). Payment for these transfers occurs only when water is needed. It is expected that water could continue to be available for spot market water purchases in the future. Up to 27 million acre-feet of water (80 percent of California's developed water) is delivered for agricultural use every year. Over half of this water is in the Central Valley; and much of it is delivered by, or adjacent to, SWP and Central Valley Project (CVP) conveyance facilities. This allows for the voluntary transfer of water to many urban areas, including Metropolitan, via the California Aqueduct.

Recent events indicate that a portion of this water could be available through mutually beneficial transfer agreements:

- The Governor's Water Bank in 1991, 1992, 1994, and 2001 secured 140,000 acre-feet per year to 820,000 acre-feet per year of water supply. The California Department of Water Resources (DWR) establishes and administers the Bank for purchasing water from willing sellers and transferring the water to those with critical needs using the State Water Project (SWP) facilities. Sellers, such as farmers and water districts, made water available for the Bank by fallowing crops, releasing surplus reservoir storage, and by substituting groundwater for surface supplies.
- Under the Central Valley Improvement Act, passed by Congress in October 1992, water agencies, such as Metropolitan, may for the first time be able to acquire a portion of the Central Valley Project's 7.8 million acre-feet per year of supply.
- Many member of the agricultural community are actively promoting the economic benefits resulting from the voluntary transfer of some of their entitlement.

EXPECTED SUPPLY CAPABILITY

Metropolitan could purchase dry year supplies from the Governor's Water Bank on an "as-needed" basis. The Bank water provides a reserve supply that could be available to Metropolitan to mitigate for unforeseen uncertainties that may impact expected supply capabilities. Metropolitan has purchased water varying in amounts from 100 to 215,000 acre-feet in a given year.

RATIONALE FOR EXPECTED SUPPLY

Implementation Status: The availability of dry year supplies from the Governor's Drought Water Bank has been demonstrated. Metropolitan has purchased dry year supplies from the Governor's Drought Water Bank in 1991, 1992, 1994, and 2001.

Historical Record: The historical record for purchases from the Bank and the number of sellers and buyers participating in the Bank is a strong indicator that there are significant amounts of water that can be purchased through spot market water transfers during dry year. This historical record is summarized are as follows:

Historical Record
Spot Market Water Purchases

Program	Purchases from Bank (acre-feet per year)		Participants	
	Total	Metropolitan	Sellers	Buyers
1991 Drought Water Bank	820,000	215,000	351	13
1992 Drought Water Bank	193,246	10,000	18	16
1994 Drought Water Bank	220,000	100	6	15
2001 Dry-year Water Bank	138,000	80,000	9	8

Written Contracts or Other Proof:

- Executive Order. In response to the extended 1987-92 drought, Governor Wilson issued an executive order establishing a Drought Action Team. This team, made up of state and federal officials, developed an action plan to lessen the impacts of the continuing drought (State 1991). One of the proposed actions was the formation of an emergency water bank managed by DWR. The purpose of the bank would be to help California's urban, agricultural, and environmental interests meet their critical water supply needs.
- Agreements with Buyers. Preceding the implementation of the 1995 and 2001 Water Banks contracts between DWR and agencies interested in buying were executed. The essential terms and conditions for negotiating purchases, including maximum offering price, quantity of water needed, and the timing of delivery, were established in these contracts.
- Agreements with Sellers. Purchases of water for the water banks have been secured through written contracts signed by DWR and sellers.
- 1999 Board Directive. Metropolitan's Board has authorized the acquisition and call of spot market water transfers in accordance with the Water Surplus and Drought Management Plan (WSDM Plan) adopted in April 1999. The WSDM Plan is a comprehensive policy guideline for managing Metropolitan's water supply during periodic surplus and shortage conditions. During shortage conditions, the plan specifies the type, priority and timing of drought actions, including the purchase of transfers on the spot market, that could be taken in order to prevent or mitigate negative impacts on retail demands.

Financing: Funds for spot market water purchases are included in Metropolitan's s annual O&M budget. Spot market purchases are paid out of Metropolitan's Water Transfer Fund.

Federal, State, and Local Permits/Approvals:

- Environmental Impact Report for the Bank. In November 1993, DWR prepared and finalized a programmatic Environmental Impact Report for the operation of the drought water banks during future drought events.
- Programmatic EIR. DWR has initiated a programmatic EIR on a permanent Drought Water Bank.

In-Basin Storage Deliveries

In-Basin Storage Deliveries

Program Capabilities*
Year 2005
(acre-feet per year)

Programs	Multiple Dry Years (1990-92)	Single Dry Year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
Current Programs				
Diamond Valley Lake	150,000	150,000	-	-
Flexible Storage in Castaic Lake and Lake Perris	70,000	70,000	-	-
Groundwater Conjunctive-use				
• Long-term Seasonal Storage	100,000	100,000	-	-
• North Las Posas Storage Program	16,700	50,000	-	-
Subtotal of Current Programs	**336,700**	**370,000**	-	-
Programs Under Development				
Groundwater Conjunctive-use Programs				
• 2006 Programs (Raymond and Proposition 13 Programs)	-	-	-	-
• Additional Programs	-	-	-	-
Subtotal of Proposed Programs	-	-	-	-
Maximum Supply Capability	**336,700**	**370,000**	-	-

* -- Represents expected supply capability for resource programs.

In-Basin Storage Deliveries

Program Capabilities*
Year 2010
(acre-feet per year)

Programs	Multiple Dry Years (1990-92)	Single Dry Year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
Current Programs				
Diamond Valley Lake	150,000	150,000	-	-
Flexible Storage in Castaic Lake and Lake Perris	70,000	70,000	-	-
Groundwater Conjunctive-use				
• Long-term Seasonal Storage	100,000	100,000	-	-
• North Las Posas Storage Program	70,000	70,000	-	-
Subtotal of Current Programs	**390,000**	**390,000**	-	-
Programs Under Development				
Groundwater Conjunctive-use Programs				
• 2006 Programs (Raymond and Proposition 13 Programs)	99,100	99,100	-	-
• Additional Programs	-	-	-	-
Subtotal of Proposed Programs	**99,100**	**99,100**	-	-
Maximum Supply Capability	**489,100**	**489,100**	-	-

* -- Represents expected supply capability for resource programs.

In-Basin Storage Deliveries

Program Capabilities*
Year 2015
(acre-feet per year)

Programs	Multiple Dry Years (1990-92)	Single Dry Year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
Current Programs				
Diamond Valley Lake	150,000	150,000	-	-
Flexible Storage in Castaic Lake and Lake Perris	70,000	70,000	-	-
Groundwater Conjunctive-use				
• Long-term Seasonal Storage	100,000	100,000	-	-
• North Las Posas Storage Program	70,000	70,000	-	-
Subtotal of Current Programs	**390,000**	**390,000**	-	-
Programs Under Development				
Groundwater Conjunctive-use Programs				
• 2006 Programs (Raymond and Proposition 13 Programs)	99,100	99,100	-	-
• Additional Programs	100,900	100,900	-	-
Subtotal of Proposed Programs	**200,000**	**200,000**	-	-
Maximum Supply Capability	**590,000**	**590,000**	-	-

* -- Represents expected supply capability for resource programs.

In-Basin Storage Deliveries

Program Capabilities*
Year 2020

(acre-feet per year)

Programs	Multiple Dry Years (1990-92)	Single Dry Year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
Current Programs				
Diamond Valley Lake	150,000	150,000	-	-
Flexible Storage in Castaic Lake and Lake Perris	70,000	70,000	-	-
Groundwater Conjunctive-use				
• Long-term Seasonal Storage	100,000	100,000	-	-
• North Las Posas Storage Program	70,000	70,000	-	-
Subtotal of Current Programs	**390,000**	**390,000**	-	-
Programs Under Development				
Groundwater Conjunctive-use Programs				
• 2006 Programs (Raymond and Proposition 13 Programs)	99,100	99,100	-	-
• Additional Programs	100,900	100,900	-	-
Subtotal of Proposed Programs	**200,000**	**200,000**	-	-
Maximum Supply Capability	**590,000**	**590,000**	-	-

* -- Represents expected supply capability for resource programs.

IN-BASIN STORAGE DELIVERIES
FLEXIBLE STORAGE USE OF CASTAIC LAKE AND LAKE PERRIS

SOURCE OF STORAGE

The flexible storage use of Castaic Lake and Lake Perris, SWP reservoirs, provides Metropolitan with dry-year supply. The State Water Project (SWP) contractors participating in repayment of the capital costs of Castaic Lake and Lake Perris have the contract right to withdraw SWP water from these reservoirs in addition to their allocated supply in any year on an as-needed basis. These contractors must replace the water that is withdrawn under this program within five years of the first withdrawal. This storage is referred to as "flexible storage". It is available in Castaic Lake to Metropolitan, Ventura County Flood Control and Water Conservation District, and Castaic Lake Water Agency and available in Lake Perris to Metropolitan.

EXPECTED SUPPLY CAPABILITY

The dry year supply available to Metropolitan from the flexible storage use of Castaic Lake and Lake Perris totals up to 218, 940 acre-feet. This total supply is comprised of 153,940 acre-feet in Castaic Lake and 65,000 acre-feet in Lake Perris. The use of this available supply is planned as follows:

Estimated Water Supplies Available for Metropolitan's Use
Under the Flexible Storage Use of Castaic Lake and Lake Perris
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	70,000	70,000	-	-
2010	70,000	70,000	-	-
2015	70,000	70,000	-	-
2020	70,000	70,000	-	-

* --Represents expected supply capability for the resource program.

RATIONALE FOR EXPECTED SUPPLY

Implementation Status: Express provisions have been incorporated in Metropolitan's SWP contract since 1995. It has been available for use since 1995 and will continue to be in effect indefinitely commensurate with the SWP contracts.

Historical Record: Metropolitan has exercised the flexible storage provision in 2000 and 2001.

Year	Castaic Lake		Lake Perris	
	Withdrawal (acre-feet)	Payback (acre-feet)	Withdrawal (acre-feet)	Payback (acre-feet)
2000	-----	-----	8,181	3,471
2001	64,300	21,971 *	10,692	5,581 *

* Metropolitan is planning to pay back additional amounts of water in 2002.

Written Contracts or Other Proof: Metropolitan's dry-year supply from flexible storage is based on existing contract provisions.

- DWR Bulletin 132-94. The use of Castaic Lake and Lake Perris is determined in accordance with the proportionate use factors from Bulletin 132-94, Table B, upon which capital cost repayment obligations are based. Based on its capital repayment obligations, Metropolitan's proportionate use of Castaic Lake is 96.2% and of Lake Perris is 100%. Per its SWP contract, Metropolitan has express rights to utilize certain portions of the SWP southern reservoirs to supply water in amounts in addition to approved SWP deliveries. Independently Metropolitan has the ability to utilize these reservoirs for such purposes.
- Metropolitan's SWP Contract. Metropolitan's SWP contract was amended in 1995 to include Article 54, "Usage of Lakes Castaic and Perris." This article provides flexible storage to contractors participating in repayment of the capital costs of Castaic Lake and Lake Perris. Each contractor shall be permitted to withdraw up to a Maximum Allocation from Castaic Lake and Lake Perris. These contractors may withdraw a collective Maximum Allocation up to 160,000 acre-feet in Castaic Lake and 65,000 acre-feet in Lake Perris, which shall be apportioned among them pursuant to the respective proportionate use factors, as follows:

Flexible Storage Allocations

Participating Contractor	Proportionate Use Factor	Maximum Flexible Storage Allocation (acre-feet)
Castaic Lake		
Metropolitan	0.96212388	153,940
Ventura County Flood Control and Water Conservation District	0.00860328	1,376
Castaic Lake Water Agency	0.02927284	4,684
Total Castaic Lake	**1.00000000**	**160,000**
Lake Perris		
Metropolitan	**1.00000000**	**65,000**

Financing: The cost associated with the withdrawal and replacement of water in the flexible storage is included in Metropolitan's annual payments under the State Water Contract.

Federal, State, and Local Permits/Approvals: The flexible storage provision became effective in 1995. This operational provision was approved by DWR and may agree to the flexible storage usage in 1995. DWR has the approval authority to affect changes in the operations and usage of existing SWP facilities, including Castaic Lake and Lake Perris.

IN-BASIN STORAGE DELIVERIES
DIAMOND VALLEY LAKE

SOURCE OF SUPPLY

To meet the region's need for additional emergency, carryover, and seasonal storage beyond the amount provided by additional Conjunctive-use, Metropolitan construction the Diamond Valley Lake. Diamond Valley Lake provides the ability to store water; delivered from the East Branch of the State Water Project and from the Colorado River Aqueduct. Currently, water is pumped through the Wadsworth Pumping Station into the lake. Once stored in Diamond Valley Lake, water can be delivered by gravity flow to the majority of Metropolitan's service area. Also the conveyance capacity into and out of the reservoir is of sufficient capacity to maximize the storage of water during periods of availability and release water to quickly to meet demands.

EXPECTED SUPPLY CAPABILITY

Diamond Valley Lake was constructed to provide emergency, regulatory and carryover storage for Metropolitan's service area, and has a total capacity of 800,000 acre-feet. An emergency storage pool of 350,000 acre-feet has been reserved in the reservoir to meet projected critical demands over the next 20 years. The remaining 450,000 acre-feet of storage has been set aside to help meet dry-year and assist Metropolitan to capture excess supply from the SWP that might otherwise be lost. The water supply available to Metropolitan is presented below:

Estimated Water Supplies Available for Metropolitan's Use
Under the Diamond Valley Lake Project
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	150,000	150,000	-	-
2010	150,000	150,000	-	-
2015	150,000	150,000	-	-
2020	150,000	150,000	-	-

* --Represents expected supply capability for the resource program.

RATIONALE FOR EXPECTED SUPPLY

Program Facilities

Major facilities at Diamond Valley Lake include three earth dams to impound water, an inlet/outlet tower, a secondary inlet from the Inland Feeder, a large pumping station to deliver water into the reservoir, and power generating facilities. Recreational facilities consisting of a marina, parks, swimming areas, golf course, hiking trails, equestrian trails and lodging are planned.

Historical Record: The Diamond Valley Lake is currently operational and is approximately 2/3rds full..

Written Contracts or Other Proof: The Metropolitan Board authorized construction of Diamond Valley Lake in 1987.

Financing: The capital cost of Diamond Valley Lake ($2 billion) was financed by a combination of revenue bonds and operating revenues. Annual operating costs, including maintenance and pumping, are included in Metropolitan's annual O&M budget.

Federal, State, and Local Permits/Approvals:. All necessary permits have been obtained. A permit to generate and sell power has been acquired from the Federal Energy Regulatory Commission. No further regulatory permits are required.

IN-BASIN STORAGE DELIVERIES
GROUNDWATER CONJUNCTIVE USE PROGRAMS

SOURCE OF SUPPLY

The Integrated Resources Plan (IRP) approved by the Metropolitan Board established Metropolitan's strategy to store imported water that is most available during wet years in surface reservoirs or groundwater aquifers for later use during droughts and emergencies. In this way, Metropolitan can reduce its reliance on direct deliveries from the State Water Project (SWP) and the Colorado River during dry years when competing demands by other users and risks to the watershed ecosystems are greatest. During the development of the IRP, the Association of Groundwater Agencies (AGWA), in cooperation with Metropolitan, undertook a study to examine the potential for groundwater storage. AGWA, which is comprised of representation for six major basins in Southern California, was created in order to work collectively on groundwater issues, including conjunctive use of imported water. The findings of the AGWA study indicated that up to 1.5 million acre-feet of total storage capacity could be dedicated to regional storage of imported supplies. Utilization of current facilities, along with some facilities improvements, could result in up to 350,000 acre-feet of additional groundwater production as a result of storing imported water over the next 20 to 30 years. Based on the AGWA study, the 1996 IRP set a resource objective to develop about 175,000 acre-feet per year of dry-year supply from in-basin groundwater storage by 2010 and 300,000 acre-feet per year by 2020. Groundwater conjunctive use capabilities are being developed in accordance with the IRP through the following programs.

Long-term Seasonal Storage Program. Metropolitan currently administers the Long-term Seasonal Storage Program to encourage the replenishment of available water in groundwater basins and local reservoirs. This program is a pricing program that makes system supplies, which are in excess of that amount needed to meet consumptive municipal and industrial demands, available to the member agencies at a discounted water rate. The replenished water must be held in storage for over one year so that it can be used subsequently during dry years.

It is estimated that an average of 100,000 acre-feet per year of groundwater supply is produced as a result of Metropolitan's existing discount pricing for winter season deliveries. In order to meet the 1996 IRP resource objective, contractual groundwater conjunctive use programs should be developed to provide 200,000 acre-feet per year of dry-year supply by 2020.

North Las Posas Groundwater Storage Program. Metropolitan's first contractual conjunctive use program was developed in the North Las Posas groundwater basin. The agreement between Metropolitan and Calleguas Municipal Water District was signed in 1995 and amended in 1998. The term of the agreement extends to 2035. About 12,000 acre-feet per year of withdrawal capacity is currently available, with additional program facilities under construction. By 2010, the North Las Posas Program will be completed and provide maximum storage capacity of 210,000 acre-feet per year and an ultimate dry-year

yield of 70,000 acre-feet per year. The construction and performance of this Program are phased.

- Annual Replenishment Capacity. The total replenishment or "put" capacity for the program will be up to 50,000 acre-feet per year. This replenishment capacity will be provided through the construction of 30 aquifer storage and recovery wells in three phases.
  - Phase 1: 8,000 acre-feet per year (on-line in 2001)
  - Phase 2: An additional 35,000 acre-feet per year (scheduled for 2005)
  - Phase 3: An additional 23,000 acre-feet per year (scheduled for 2010)
- Annual Withdrawal Capacity. The total withdrawal or "take" capacity for the program will be up to 70,000 acre-feet per year. This withdrawal capacity will be provided through the construction of 30 aquifer storage and recovery wells in three phases).
  - Phase 1: 12,000 acre-feet per year (on line in 2001)
  - Phase 2: An additional 35,000 acre-feet per year (scheduled for 2005)
  - Phase 3: An additional 23,000 acre-feet per year (scheduled for 2010)
- Maximum Storage Capacity. The maximum storage capacity is 210,000 acre-feet.

Based on the parameters and construction schedules for the program, the dry-year supply available from this program is as follows.

Estimated Water Supplies Available for Metropolitan's Use Under the North Las Posas Program
(acre-feet per year)

Year	Multiple Dry-years (1990-1992)	Single Dry-year (1977 Hydrology)	Average Year	Wet Year (1985 Hydrology)
2005	16,700	50,000	-	-
2010	70,000	70,000	-	-
2015	70,000	70,000	-	-
2020	70,000	70,000	-	-

* --Represents expected supply capability for the resource program.

Groundwater Storage Programs Operational in 2006: Metropolitan is currently negotiating additional contractual conjunctive use agreement in Raymond Basin and several programs partially funded by Proposition 13. In January 2000, the Metropolitan Board authorized entering into agreements with the City of Pasadena and Foothill MWD to implement the groundwater storage program contingent upon satisfactory completion of all necessary environmental documentation. The Board also appropriated funds to conduct initial environmental, engineering, and planning studies. The Program is expected to yield 50,000 acre-feet in a dry year by 2005.

A total of $45 million in Proposition 13 local assistance grant funds have been allocated to Metropolitan by the California Department of Water Resources to help finance groundwater conjunctive use programs within Metropolitan's service area. Metropolitan

Contractual Groundwater Storage Programs Operational by 2006

Programs	Total Storage Capacity (acre-feet)	Dry-Year Yield (acre-feet per year)
Project Name: Raymond Basin Groundwater Storage Program Submitted by: City of Pasadena, Foothill MWD	75,000	25,000
Project Name: Phase 1: Long Beach Conjunctive Use Storage Project Submitted by: Central Basin MWD, West Basin MWD, Long Beach, Compton, Torrance	13,000	4,333
Project Name: Foothill Area Groundwater Storage Project Submitted by: Foothill Municipal Water District	9,000	3,000
Project Name: National City Aquifer Storage and Recovery Project Submitted by: Sweetwater Authority Sponsored by: San Diego County Water Authority	9,900	3,300
Project Name: Mission Basin Groundwater Storage and Recovery Submitted by: City of Oceanside Sponsored by: San Diego County Water Authority	5,700	1,900
Project Name: Orange County Groundwater Conjunctive Use Program Submitted by: Orange County Water District Sponsored by: Municipal Water District of Orange County	60,000	20,000
Project Name: Spadra Basin Injection/Extraction Submitted by: Three Valleys MWD	2,400	800
Project Name: San Dieguito Recharge and Extraction Project Submitted by: Olivenhain MWD Sponsored by: San Diego County Water Authority	2,250	750
Project Name: Live Oak Basin Conjunctive Use Project Submitted by: Three Valleys MWD	21,000	7,000
Project Name: Chino Basin Programs Submitted by: Chino Basin Watermaster Sponsored by: Inland Empire Utility Agency	100,000	33,000
Total	**298,250**	99,100

* --Represents expected supply capability for the resource program.

issued a Request-for-Proposal (RFP) to its member agencies in November 2000. In response to this RFP, 18 proposals were submitted by twelve member agencies. Nine of the proposals were shortlisted and an additional two were wait-listed. In April 2001, the Metropolitan Board of Directors authorized finalization of agreement terms with the member agencies submitting shortlisted proposals and required that implementation of the agreement include the initiation of construction by September 2003. The approved Proposition 13 Programs are expected to yield 74,000 acre-feet in a dry year starting in 2005-2006 and continue to be operational over the 25-year agreement term. The dry-year yield from these groundwater conjunctive use programs, which are expected to be operational by 2006, are as follows:

Additional Groundwater Conjunctive Use Programs: Beyond 2006, it is anticipated that additional dry-year supply would be developed through the implementation of the wait-listed proposals and the potential expansions of the 2006 programs. These potential programs are described as follows:

Additional Groundwater Conjunctive Use Programs

Programs	Total Storage Capacity (acre-feet)	Dry-Year Yield (acre-feet per year)
Project Name: Elsinore Valley Groundwater Storage Program Submitted by: Elsinore Valley MWD Sponsored by: Western MWD	66,000	22,000
Project Name: San Gabirel Basin Conjunctive Use Project Submitted by: Three Valleys MWD	15,000	5,000
Expansion of 2006 Programs	TBD	TBD
New Groundwater Storage Programs	TBD	TBD
Total (Required Yield to Meet IRP Resource Objective in 2020)	**302,700**	**100,900**

* --Represents expected supply capability for the resource program.

RATIONALE FOR EXPECTED SUPPLY

Implementation Status: The status of implementation for the groundwater conjunctive use programs has been described under the "Source of Supply".

Historical Record:

- Long-term Seasonal Storage Program. As a result of Metropolitan's Long-term Seasonal Storage Program, local agencies are currently storing available imported water in order to increase groundwater production during the summer season and dry years. Based on the historical record for replenishment deliveries, it is estimated that an average of 100,000 acre-feet per year of groundwater supply is produced as a result of Metropolitan's existing Long-term Seasonal Storage Program.

- North Las Posas Groundwater Storage Program. The first phase of the program's ASR wells has been constructed, providing approximately 8,000 acre-feet per year of replenishment capacity and 12,000 acre-feet per year of withdrawal capacity. Metropolitan currently has about 30,000 acre-feet in storage..

Written Contracts or Other Proof: Metropolitan's dry-year supply from the groundwater conjunctive use programs is based on Metropolitan's Board actions and agreements.

- Approval of Long-term Seasonal Storage Program. Beginning in fiscal year 1989-90, Metropolitan implemented the Long-term Seasonal Storage Program. The continuation of this program was reaffirmed as part of the new rate structure that was approved by Metropolitan's Board in October 2001.
- Agreements for North Las Posas Groundwater Storage Program.
  - An Agreement between Metropolitan and Calleguas Municipal Water District (Calleguas) was executed in June 1995. The term of the Agreement extends to 2035. In this Agreement, a groundwater conjunctive use program would be implemented in the North Las Posas Groundwater Basin. Calleguas would build and operate a total of 30 Aquifer Storage and Recovery (ASR) wells and appurtenant facilities. Metropolitan would reimburse Calleguas for the cost of construction in exchange for use of the storage and pumping capacities. Metropolitan would have the capability to store 100,000 acre-feet of imported water and withdraw from storage 70,000 acre-feet per year.
  - An amendment to the Agreement between Metropolitan and Calleguas was executed in May 1998. The amendment allows Metropolitan to increase its storage capability from 100,000 acre-feet to 210,000 acre-feet and Metropolitan and Calleguas to improve the operation plans and financing structure for the program.
- Groundwater Conjunctive Use Programs Operational by 2006.
  - AGWA study dated month 1994, identifying the potential storage capacity and return capabilities from groundwater conjunctive use programs.
  - Principles for groundwater storage adopted by the Metropolitan Board in January 2000.
  - Resolution for Proposition 13 Funds adopted by the Metropolitan Board in October 2000.
  - Request-for-Proposal for groundwater conjunctive use projects issued in November 2000.
  - Information Letter to Metropolitan Board regarding the selection of groundwater conjunctive use projects in April 2001.
  - Term sheet for groundwater storage program between Metropolitan and Municipal Water District of Orange County executed in August 2001.
  - Term sheet for groundwater storage program between Metropolitan and Inland Empire Utility Agency executed in August 2001.
  - Term sheet for groundwater storage program between Metropolitan and Three Valleys MWD executed by June 2002.

- Term sheet for groundwater storage program between Metropolitan and Central-West Basin, and the cities of Torrance, Compton, & Long Beach executed by June 2002.
- Term sheet for groundwater storage program between Metropolitan and Inland Three Valleys MWD executed by June 2002.
- Term sheets for San Diego groundwater storage programs to be executed by June 2002.
- Agreements to implement the 2006 groundwater storage programs to be executed by September 2002.

Financing: Financing has been supplied from multiple sources as discussed below:

- Financing for Long-term Seasonal Storage Program. No capital or O&M costs are associated with the implementation of the Long-term Season Storage Program. Rather Metropolitan provides a discounted water rate to encourage member agencies to take delivery of surplus water for storage purposes.
- Financing for North Las Posas Groundwater Storage Program.
  - Metropolitan's Board appropriated $6 million to construct wells and appurtenant facilities in Phase 1 of the program in June 1995.
  - Metropolitan's Board appropriated $25 million to construct wells and appurtenant facilities Phase 2 of the program in January 1998.
- Financing for 2006 and Additional Groundwater Storage Programs
  - Metropolitan's Board appropriated $210,000 to conduct initial environmental, engineering and planning studies for the Raymond Basin storage program in January 2000.
  - Proposition 13 funds ($45 million) were allocated to Metropolitan by the state in May 2000 for the development of local groundwater storage projects.
  - Metropolitan's long-term capital program includes $210 million to implement groundwater conjunctive use programs through 2020.

Federal, State, and Local Permits/Approvals:

- Final EIR for North Las Posas Groundwater Storage Program. Environmental Impact Report for the North Las Posas Groundwater Storage Program was certified by Calleguas Municipal Water District, lead agency, and by Metropolitan, responsible agency, in April 1995 and June 1995, respectively.
- Environmental Review for 2006 Programs. Environmental review of the 2006 Groundwater Conjunctive Use Programs will be initiated in 2002.

Disclosure Statement

REPORT ON METROPOLITAN'S WATER SUPPLIES DISCLOSURE STATEMENT

Recent legislation authored by Senator Sheila Kuehl (SB 221) and Senator Jim Costa (SB 610) requires water retailers to demonstrate whether their water supplies are sufficient for certain proposed subdivisions and large development projects subject to the California Environmental Quality Act (CEQA). Although Metropolitan and other water wholesalers do not have verification responsibilities under this legislation, information provided by Metropolitan may be useful to retailers in complying with these responsibilities.

This report identifies actual and projected demands for water from Metropolitan as well as the water supplies available to Metropolitan to meet those demands. The information used in developing demand projections in this report includes data provided by the Southern California Association of Governments (SCAG), the San Diego Association of Governments (SANDAG), Metropolitan's public member agencies and other sources. The information used in developing supply projections includes data provided by the California Department of Water Resources regarding State Water Project supplies, the United States Bureau of Reclamation regarding Colorado River supplies, and other sources. Other information regarding water demand and supply is available to readers in Metropolitan's Integrated Resource Plan (IRP) and Regional Urban Water Management Plan (RUWMP). While there is information in the report discussing dry year water availability and Metropolitan's Water Supply and Drought Management Plan (WSDM Plan), this report does not cover Metropolitan's policies regarding water shortage allocations. Metropolitan's policy for water shortage allocations is to provide deliveries consistent with California law and the WSDM Plan; more information on this issue is available elsewhere.

Although all information in this report is believed to be accurate as of the time of issuance, Metropolitan does not warrant as to the reliability of information contained in this report supplied by third parties. Readers should make their own judgements to the extent on which they rely on the information in this report. This report will be updated as new information and circumstances warrant.